DEVOTED TO AGRICULTURE AND ALL ITS KINDRED ARTS AND SCIENCES.

Agriculture not only gives riches to a nation, but the only riches she can call her own.—JOHNSON.

VOL. II. SATURDAY, AUGUST 3, 1850. NO. 16.

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

THE APPLE-TREE BORER.

THIS borer, which also infests the quince, mountain ash, and various other trees, is frequently so destructive to apple-trees, that some orchardists have almost been disposed to abandon their cultivation. We hear of a great many remedies for the injury done by this insect, and of various modes of preventing their depredations, and we hope that more experiments will be made on this subject.

The grass and weeds should be kept from the tree, that the operations of the worm may be known. Ashes, lime, and other offensive substances, laid around the tree, have, in some cases, prevented the operations of the borer, but it is not infallible. Various offensive or corrosive washes may be used to advantage, but they cannot always be relied on. All these things have a good effect, and cause greater scarcity of worms.

When no plants are growing around the tree, and the earth is smooth, the operations of the borers may be seen by the dust thrown from their holes; and as they enter just under the bark the first year, they will do but little damage that season, and they may be easily destroyed, without any material injury to the trees.

But when they have operated the second year, it is not only a great deal of labor to destroy them, but the trees are seriously injured or are destroyed by them. Therefore it is important to attend to this subject in season, and make thorough examinations, and use effective means to destroy these depredators.

When the cultivator has been so negligent as to allow the borers to penetrate the tree to a considerable distance, they may be destroyed by running a piece of wire, whalebone, or other elastic substance, into their holes. Truman Clark, Esq., of Walpole, remarks that he destroys them by plugging their holes with tobacco. These worms evidently enlarge the holes where they enter, as they continue to grow larger, in order that they may have sufficient room to throw out the chips or dust which they make in their borings. The tobacco may stop their operations in this respect, or the odor of it may destroy them. It has been observed that a lighted match, put into the hole of a borer, and plugging up the hole immediately, will destroy it.

On the 310th page of our first volume, a correspondent states that he destroyed the worms that were in his trees, by putting around each tree one or two shovelfuls of wood ashes, and a covering of four inches of swamp muck over the ashes. This remained from April to August, and on removing it, the worms were destroyed, as they could not operate with this body of earth around their holes.

In our warfare against this formidable insect, we should endeavor to prevent the deposition of the eggs upon the tree, by some offensive substance, or destroy them by offensive or corrosive matters, or arrest the progress of the borers soon after they enter the tree, else they will do the work of destruction, and the killing of the borers will not repair the evil, though it may prevent their increase, or hinder the insect from escaping and propagating a litter of young depredators.

THINNING FRUIT.

Those cultivators who have not had much experience in raising fruit, neglect to thin it; consequently, their fruit is inferior, both in size and quality, and the quantity no larger. Owing to its inferiority, it sells at a much less price than it would under judicious management.

One peach-grower informed us that he had taken off two thirds of his peaches, and as they increased in size, and appeared too thick on the trees, he said that he was sorry that he had not taken off one half of the other third. One man complained to his neighbor, that a certain variety of the peach which his friend had advised him to cultivate was a poor bearer. "Stop your complaint," was the reply, "until you sell your fruit." He raised on one tree three dozen of peaches, sold them at two dollars per dozen, and was satisfied.

In many cases it is necessary to thin fruit, reducing it, sometimes, to one half the specimens, and sometimes a still greater reduction is necessary. Besides the injury to the fruit from too large a crop, the tree is also injured by exhaustion, which will

stint its growth, render it unhealthy, and cause light crops in future, particularly in the next season.

Experience in this business is necessary, for but very few persons can be taught, by precepts, the great importance of thinning fruit; so they will go on allowing too much to remain on the trees, till they gradually learn, from practice, the good effects of thinning.

WEEDS.

As soon as the haying season is over, or in dull weather, every opportunity should be improved for the destruction of weeds before they go to seed. A single stroke of the hoe will destroy a weed that would produce seed for hundreds, if neglected, which would require a long time for their destruction. How often do we see, early in the fall, a crop of weeds, fully equalling, in amount of produce, the cultivated crop! In this case, and in all cases where there is only a moderate crop of weeds, the cultivated crop is reduced in value, besides the serious injury from propagating a great pest.

Some weeds are succulent, and when dug up they may be turned to some small account by throwing them into the hog-pen. When this is not convenient, and there are many weeds, it is best to pile them into heaps, that they may decompose and form manure. When allowed to remain scattered on the ground, they become wasted in decomposing. The gases are scattered to the winds, and a small amount of almost useless fibrous matter remains. To save all the fertilizing matter of weeds, throw earth over the heaps, or bury the weeds in the soil.

SUMMER PRUNING OF GRAPE-VINES.

Grape-vines are generally poorly managed. The trimming late in fall or early in spring is insufficient; consequently by midsummer the vines become a dense mass, and then the wood and foliage are reduced in the most injudicious manner, without any regard to the peculiar nature of the plant; and in this way the crop is frequently nearly destroyed.

The main vine, or laterals, running from the fruit, should be allowed to extend until August, and generally it would better grow until the middle of that month, and then it should be only pinched off at the end, — not cut back, as many practise. Some imprudently cut back to the fruit, others almost to it, which will check the growth of the fruit, and retard or prevent its ripening. If this is done early, say in July, nature makes an effort to repair the injury by throwing out lateral branches; and this often increases the evil which it was intended to remove, as the laterals make the dense mass of vines still greater.

Let the shoots extend from the fruit in every way, and direct them separately, so as not to form a mass of vines; and when the vines are too thick, cut out branches that have no fruit on them, and lateral shoots, extending the vines far in every direction, and keeping them open to the sun; but do not remove leaves, nor place the vines in such a position as to let the sun shine on the fruit, as this injures it. Expose the leaves to the sun, and let them protect the fruit from his powerful rays.

We are sorry to say that some professional horticulturists manage grape-vines no better than the veriest novice, and the management of both is much worse than no management, or entire neglect. In numerous cases we have seen the crop ruined by cutting back close to the fruit, by those whose whole life has been passed in the garden. One gentleman has just remarked that he paid a gardener six dollars for spoiling his vines.

BUDDING.

August is the month in which the greater part of budding is done in this part of the country. Plums, cherries, and pears, that are several years old, or of moderate growth, are usually in condition for budding about the first of the month; but in some seasons these species of trees, when young and vigorous, and the season favors a late growth, will answer to bud the last of August, and even in the first week in September. Much depends on the weather, the soil, and various other circumstances that affect the growth. The middle of September is a good time to bud peaches of one season's growth. The operator must depend on his judgment as to the proper time, as it varies with seasons and other conditions.

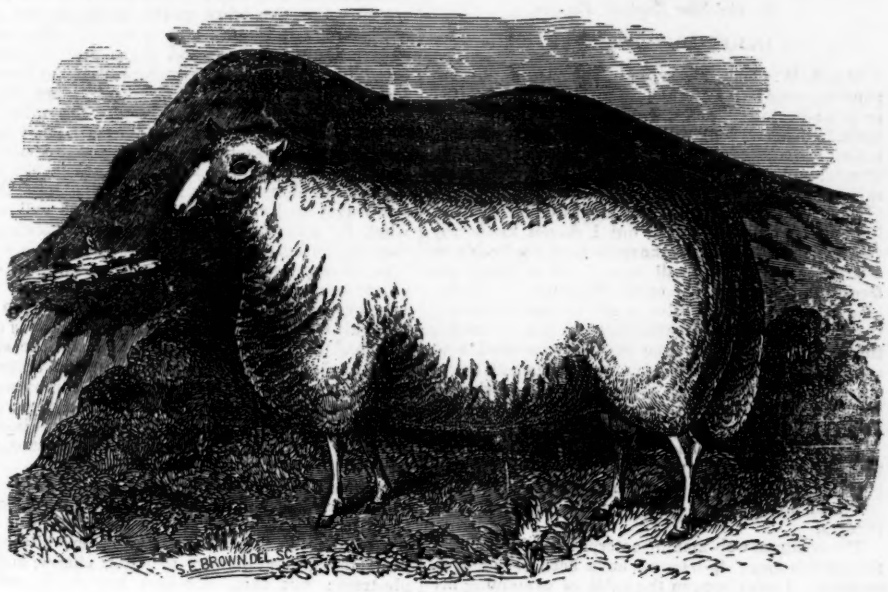
GRAIN CROP.

From numerous accounts from different sections of the country, it is evident that the crop of wheat, in most regions, will be remarkably good. In foreign countries the crops are also very good. Hence we may suppose that there will be a good supply of wheat and flour, and at moderate prices. The crops of rye and other small grain are good, or very promising. In the west the crop of wheat is unusually large, notwithstanding the very severe drought in May.

TO GUARD THE LUNGS WHILE THRESHING.

The following may be depended upon as a perfectly safe and convenient mode of guarding the lungs while threshing, as I have tested it for several years, and never knew it to fail: Take a piece of fine sponge, about two inches thick in the centre, and about four inches broad; cut out a little in the centre, so that it will fit the nose and mouth, leaving it about three fourths of an inch thick over the end of the nose and mouth; moisten it well, and squeeze it out, so as to prevent its dripping; fasten a string to the outer edge of the sponge, on each side of the face, and tie it back of the head, and one can work in a perfect smother for hours — I might say days — without any of those disagreeable sensations that are always experienced without such precaution. This will not obstruct the breath one tenth part so much as a piece of gauze will when drawn over the face. I would rather give one dollar per day for a good sponge, than to tend a threshing-machine without it. AN EXPERIENCED THRESHER.

— *American Agriculturist.*



CHEVIOT SHEEP.

The Cheviot sheep are among the most distinguished breeds in Great Britain. They are remarkable for their hardiness, and are admirably adapted to hills and mountains in cold regions; not only enduring cold and storms, but hard fare. They come to maturity rather early, and their flesh is of superior quality. Their wool is rather coarse, and used mostly for combing purposes.

This is the principal breed kept on the Cheviot Hills, an extensive elevated range, where snows and storms often prevail during the winter, and where they are supported on the grass and hay of these hills. So long have they been kept on these mountains that their origin or introduction to them cannot be distinctly traced.

The size of the Cheviot sheep is moderate, wethers averaging from twelve to eighteen pounds per quarter: the color of the face and legs is white; the countenance open; the eye lively and prominent; the ear large; the body long; and the limbs are long, which fits them for travelling, and enables them to pass over bogs and snows. The fleece is close, which protects them not only from cold, but from snow and rain.

This breed of sheep has been extended over the Highlands in Scotland, and is becoming very popular in elevated regions. They rank among the best in quality of mutton, and they fatten very readily; and though their fleeces are not fine, they are rather large and profitable.

We have no doubt that this breed of sheep is well adapted to the elevated and hilly regions and mountains in the middle and northern parts of our country, and we hope that experiments will be made to test their utility in such regions. This subject has received but little attention. Hon. Daniel Webster has some of this breed on his farm in Marshfield, and he is much pleased with their appearance. But from what we have heard of his farm, we should not think that this breed is so well adapted to it, as some of the larger breeds, that are accustomed to luxuriant herbage on flat or slightly rolling lands. They will doubtless be propagated on this farm, and distributed and fairly tested in more elevated regions.

The Cheviot breed has been crossed with the Leicester, which gives them finer forms, but the wool is longer and coarser. This cross prevails considerably in Scotland, where it is much admired, and is taking the place of the native black-faced breed of that country.

He is a public benefactor, who, by the prudent and skilful outlay of his money in bettering its condition, shall make a single field yield permanently a double crop; and he who does this over a square mile, virtually adds a square mile to the national territory — nay, he does more; he doubles, to this extent, the territorial resources of the country, without giving the state any larger actual area to defend. All hail, then, to the improvers of the soil! Health and long life be their fortune — may their hearts be light and their purses heavy — may their dreams be few and pleasant, and their sleep the sweet repose of the weary — may they see the fruits of their own labor, and may their sons reap still heavier harvests. — *Selected.*

First procure first-rate animals for your farm, and then procure good, humane, and intelligent men to take care of them.

For the New England Farmer.

INJURIOUS INSECTS.

Mr. S. W. Cole. Dear Sir: The insects, accompanying your letter of the 5th instant, were *Aphides*, or plant-lice, in several stages of growth; those with black bodies and long wings being the males and females, those like bugs and without wings being half grown; and the flakes, like mould, being the cast-skins of the young.

Various remedies have been suggested for destroying aphides on apple-trees; but I do not know any that are effectual, and, at the same time, applicable on a large scale. In a small way, as on a few young trees, the insects may be easily destroyed by syringing repeatedly with a solution of oil-soap, or dipping the infested twigs in a wide basin or pan containing this liquid. Ashes or lime may also be used with advantage, being thrown upon the twigs and leaves when wet with dew or rain. Perhaps syringing with lime-water will be found a good remedy; but experiments are wanting to test its efficacy.

As usual, we have had our full share of destructive insects during the present season. My own little place gives me some opportunity of seeing their power of doing injury, and of trying to check their ravages.

The common web-making caterpillars of the apple-tree (*Clisiocampa Americana*) have been very few in number. I have been in the habit of examining my trees when out of leaf, and taking off the ring-like clusters of eggs and destroying them, so that very few escape me; and when these are hatched in the spring, and the caterpillars begin making their webs, which are easily seen on small trees, they are searched for, and are destroyed by a single grasp.

On the other hand, the canker-worms (*Anisopteryx vernata*) have returned in great force, and have done more damage in this vicinity than at any time since the year 1840. Repeatedly, during the last three years, I have called attention to the fact of the gradual increase of these noxious vermin, but I am not aware that my efforts have been seconded in any quarter. The females rose in great numbers last autumn, and they continued to rise, at short intervals, during the unusually mild and open winter, which was extremely favorable to their operations, and most unfavorable to the success of the usual means for arresting their progress. It followed that tarring in the fall and spring was of very little use, and the trees were well seeded with eggs, during the winter, for an abundant harvest of canker-worms. Again I have had an opportunity of verifying the truth of statements heretofore made by others as well as by myself, — statements contradicted by some writers in the Western States, — that the females lay their eggs on the small limbs and twigs of the trees, and not ordinarily on the trunk. On my place, there are apple-trees of various sizes, some very large, and others quite small. On both, the females were found laying their eggs near the extremities of the branches, and not at all upon the trunks. Our unfortunate experience, during the last winter, must not lessen our faith in tarring as a preventive; for such an open winter may not soon occur again. Let not tarring be neglected next autumn, after the first hard frost.

While the canker-worms were eating up the leaves, the curculios (*Conotrachelus Nenuphar*) were stinging the fruit. Apples, cherries, and plums, at various stages of growth, have been attacked by them. My Baldwin apples began to drop when not much bigger than musket-balls. I should think that full one half of all that have fallen have been stung by the plum-weevil; the others were bored by the common apple-worm, (*Carpocapsa Pomonella.*) These insects are easily distinguished from each other; the latter having feet, which are wanting in the plum-weevil. Cherries, when weevil-stung, do not ordinarily drop off. Hence, among ripe cherries, wormy ones are often found; and not a few of them are eaten by the incautious, who, however, may have the satisfaction of knowing that thereby they help to check the increase of these insects. The robins and cherry-birds doubtless come in for their share of the spoils and of the spoilers. If the plum-weevils want to escape this kind of retributive justice, they must stick to the plums, and let the cherries alone. As for the wormy apples, we can diminish the evil somewhat, by gathering, every night and morning, all that fall, and giving them to our swine. It is a mistake to suppose that the plum-weevil stings the plums only when the fruit is small. My trees were jarred every night and morning from the time that the fruit was set till it had grown as large as cherries, and not one curculio was taken in the sheets spread below them, and not a single plum, up to that time, appeared to have been stung. Circumstances prevented my continuing this precaution afterwards; and now I find that nearly all the fruit has been attacked. Last year, I saved my plums by jarring the trees till the fruit was grown to its full size.

On the 15th of June, I found a single rose-bug, (*Macrodactyla subspinosa,*) but saw no more till about the first of July. These insects have been very troublesome, in this vicinity, during several previous years, doing great damage to plum, cherry, and apple-trees; but their numbers are much reduced during the present season, and the fruit-trees above named have suffered scarcely at all from their attacks. I have not, however, neglected gathering all that were within reach in my garden.

Of other destructive insects some notice may be taken at a future time; the present communication being quite as long as may suit your convenience.

Respectfully yours, T. W. HARRIS.

Cambridge, *July* 13, 1850.

Remarks. — The insects which we sent to Dr. Harris were from large apple-trees, the leaves of which were turning yellow and black, and falling from the trees. For a few years past, these insects have been prevalent and very destructive in some sections, and they seem to be increasing. We have destroyed aphides upon young shoots of nursery trees by the use of whale oil soap, but it would be a great deal of labor to apply it to large trees. — Ed.

For the New England Farmer.

EARLY BEARING OF FRUIT-TREES.

Mr. Cole: I have seen an inquiry in your paper of June 22, whether large fruit-trees, when grafted, will bear fruit sooner when the scions are taken from bearing trees than when taken from young trees. I have followed the grafting business for the last fifteen years, every spring, excepting the past one, setting from 3000 to 4000 scions each season, and am always trying experiments. I have found that scions taken from an old bearing tree will bear fruit in less than half of the time that they will taken from a very young and thrifty tree, and much sooner than they will from a medium-aged tree. I ingrafted some young apple-trees with the Porter apple, eight years ago, and a part of the scions I took from an old tree, and a part of them from very young and thrifty trees. Those that I took from the old tree have borne three years; the others have apples on them this year for the first time. Many other similar circumstances could be mentioned. I have upwards of

one hundred varieties of pears, and nearly or quite as many apples, and I have tried many ways to bring them to bearing as soon as possible, but have not, as yet, found any way that I could get fruit as soon as to graft them into a tree that had come to maturity. Therefore I have no hesitation in saying that, with my experience, scions taken from an old tree and set in a young tree will bear much sooner than others; and scions taken from a young tree and put in an old tree will bear much sooner than on their own stock.

L. BURT.

WALPOLE, N. H., *July* 15, 1850.

REMARKS. — We should be pleased to learn the results of other experiments on this subject, as other persons have come to a different conclusion from that of our correspondent. Here is an important point for consideration. A scion is taken from an old bearing tree, and set in a small stock near the ground, and in the summer of the same season the shoot from that scion is used for budding, with other shoots from the tree that the other scion was taken from. Now, will that scion, from its being only a few months on that young stock, lose its disposition to bear to as great a degree as though it had remained several years before it was used for budding?

For the New England Farmer.

FOOD OF PLANTS.

The food of animals always consists either of other animals, or vegetables, or a mixture of both, together with water, or some fluid containing a considerable portion of water, for drink; that is, as a solvent to the more solid matters. Plants, again, strictly speaking, subsist on drink alone, being, indeed, incapable of taking up any solid matter, at least till it be previously dissolved or diffused in water.

There is an obvious and well-known proof that plants live on water, chiefly, if not altogether, derived from hyacinths and other bulbs placed in glasses, and supplied with water, in which they blow as well as in a garden. It is found, however, that they do not thrive unless the water is regularly changed, indicating that it is not the water alone, but something in the water, which becomes exhausted and deteriorated by the feculent slime discharged by the plant. It has also been found, by experiment, that distilled water will not support a healthy growth in plants; and most, if not all species, when planted in pure calcined sand, and watered with distilled water, quickly die, as they do when quite deprived of water.

From chemical analysis and experiment, it appears that the chief matters taken up by the plants, besides water, consist of carbonic acid gas and azote, together with a few salts, such as potash; and out of these, and the hydrogen and oxygen of the water, all vegetable products seem to be wholly or chiefly elaborated. Mr. Lassaigne proved that these all pass into the plants from without, by the ingenious experiment of analyzing the chemical constituents of seeds before and after germination.

When, by chemical experiment, substances are found in plants different from those supposed to have been introduced from the soil, it is not to be inferred that the plants have created these, but that they have gradually taken them up in very minute portions, till a considerable quantity has been produced.

It is proper to confess, however, that we are still much in the dark upon this interesting subject, it being extremely difficult, if not impossible, to trace the fluid taken up by a plant after it passes beyond the surface.

BERNARD REYNOSO.

AMERICAN POMOLOGICAL CONGRESS.

In conformity with the resolutions passed at the last session of this national institution, its next meeting will be held in the city of Cincinnati, Ohio, on the 11th, 12th, and 13th days of September next, A. D. 1850.

The Ohio State Board of Agriculture, and the Cincinnati Horticultural Society, will also hold their Annual Exhibition at the same time and place, and the latter have generously offered to provide for the accommodation of the Congress.

All *agricultural*, *horticultural*, *pomological*, and *kindred societies* in the United States and the Canadas are hereby respectfully invited to send such number of delegates as they may deem expedient.

In order to facilitate the objects of this association, to promote pomology and the sciences upon which it depends, to collect and diffuse a knowledge of researches and discoveries in this important department, delegates are requested to bring with them specimens of the fruits of their respective districts, with lists of the same, and also papers descriptive of their art of cultivation, of diseases and insects injurious to vegetation, of remedies for the same, and whatever will add to the interest and utility of the convention.

Packages of fruit not accompanied by its proprietor, may be addressed to the care of Messrs. John F. Dair & Co., Lower Market Street, Cincinnati, O. These should be very distinctly marked, "FOR THE AMERICAN POMOLOGICAL CONGRESS."

All societies to be represented in this Congress will please forward certificates of the election of their several delegations to J. B. Russell, Esq., corresponding secretary of the Cincinnati Horticultural Society. Delegates will also report themselves at the Burnet House, on the morning of the 11th, where a committee will be in attendance to take charge of their fruits, and from whence the Congress will proceed to the hall assigned for its meetings.

MARSHALL P. WILDER, *President.*

S. B. PARSONS,
P. BARRY,
GEO. W. DEACON, } *Secretaries.*

July 4, 1850.

Editors who feel interested in the objects of the above association are respectfully solicited to notice this circular.

REMARKS. — Although this association will be held in a comparatively new part of this new world, yet we shall expect not only numerous and excellent productions in the west, equal to any thing that can be produced in any part of the world, but a large gathering of the most intelligent and most eminent growers of fruit. Already this young region takes the lead in some pomological productions. More strawberries and grapes are raised around Cincinnati than in any other section of the country; and throughout the great west are pomologists second to none in the Union, and the number is large in that region that are doing themselves great honor and the country much good by their zeal and ability in this worthy cause. The doings of the Ohio Fruit Convention, which have been published for several years, are among the most instructive and reliable works of the kind that have been published in our country. Besides the contributions and attendance from the west, other parts of the country will also be well represented. — ED. N. E. FARMER.

WILD FLOWERS.

To those of our lady readers interested in floriculture, we would recommend, for the adornment of their gardens, one great and inexhaustible storehouse of beauty; namely, the woods and fields, with their wealth of uncultivated blossoms. It is in the power of almost every one to draw from this source, and, such is the perversity of human nature, perhaps on this very account, the opportunity is neglected. While various flowers, neither graceful nor fragrant, are admitted into the limited precincts of a garden, because, perhaps, they are rare, of difficult growth, or foreign extraction, many a wild, sweet native of our own hills and valleys would be altogether denied a place there. This is in bad taste, and the usual plea, "O, they are so common!" is by no means a reasonable or satisfactory objection. Whatever is perfectly beautiful might claim a place, though this would include so immense a collection that, of course, we would recommend a judicious selection from so vast a stock. How often in gardens have we seen the coarse and common althea towering in pride, and usurping a place which might have been filled to great advantage by a cluster of wood laurel, with its evergreen glossy leaves, and its rich, heavy clusters of rosy blossoms, or even by a specimen of the magnolia, with its white, glittering flowers, and its delicious perfume, scenting the whole garden! We have heard it advanced, particularly by foreigners, that our wild flowers have no smell; but let any one ride along the skirts of a wood, on a calm spring morning or evening, and judge for himself. Nothing can exceed their delicate odor, and we have often discovered their hiding-places by this telltale charm.

We have not the slightest wish, in this article, to discourage the cultivation of our numberless and beautiful garden plants. We would not be so understood. Their strong claims shall meet our attention in due season; but, at present, we think of advocating the cause of the too much neglected offspring of the fields. In gardens in the city, their presence is always desirable and grateful, and they improve amazingly by cultivation.

One objection often urged against them is, that they are single. This, to us, is a great charm; and if our readers will but compare the hue of a single blossom with that of a double one, they will be converts to our opinion. Take, for instance, a single dahlia or wild rose, and compare the color with that of a double one. Has the latter the same brilliancy of color? Does it glitter like the former, as if sprinkled with gold-dust? This difference, too, is very perceptible in all white double flowers. They never have the purity of single ones. Still, all the efforts of some of our gardeners seem to be directed to the one point of creating monsters in the floral world. No matter how delicate and beautiful the original blossom, it must be reproduced with three heads instead of one, to satisfy their elegant taste. Flowers are often totally ruined by this plan. We have seen hyacinths so double that they could not possibly expand, and were worthless; and last spring we received a bunch of violets, — violets! ladies, — with heavy little monster heads, which they seemed to hang down, as well they might, in very shame. We expect soon to see a double heart's-ease, or lily of the valley. If so, bad taste will have reached its climax. — *North American Farmer.*

A NOBLE HORSE.

Grant Thorburn says, "I once saw a horse, in the neighborhood of New York, dragging a load of coal (twelve hundred weight) in a cart. The lane was very narrow; the driver, some distance behind, conversing with a neighbor: the horse, on a walk, came up to a child, sitting on his hind quarters in the middle of the road, gathering up dust with his little hands, and making 'mountains of molehills.' The horse stopped — he smelt of the child; there was no room to turn off. With his thick lips he gathered the frock between his teeth, lifted the child, laid him gently on the outside of the whole track, and 'went on his way rejoicing' — and well he might rejoice! he had done a good deed."

SUMMER MANAGEMENT OF PYRAMIDAL TREES.

No matter how well trees may have been pruned before the growing season commenced, a little attention during summer is absolutely necessary. It is impossible for the most skilful pruner in existence to cut exactly, in all cases, at the proper point, or at least at the point that would induce the precise development of buds and branches that he wants; certain buds will push with greater or less vigor than he had reason to expect, from their appearance and position, and thus the balance proposed to be maintained is broken. In such cases, we must, at the proper moment, when growth is going on, resort to what is called pinching — nipping off with the finger and thumb (a sharp knife is better) the point of such shoots as are exceeding their due relative proportions. The leading shoot, that is intended to constitute the main trunk of the tree, should always take the lead; none of the lateral or side-shoots should be permitted to dispute its supremacy. If these shoots had been timely nipped, the branches below them and the leader above would all have had their just proportions. We therefore point this out as an item of very great importance in growing pyramidal pears. When the tree is left to itself during the whole season, and in the fall we find it grown so out of proportion a great deal of severe pruning is necessary to restore the balance, these strong branches next the leader have to be cut to one eye, perhaps, and the whole pyramid is injured and considerably retarded. What we have said has reference mainly to the leading shoot and those in its vicinity; but it applies with exactly the same force to all the main side-branches, which may be considered as so many leading shoots, and will require the same care and treatment.

There is another evil that must be remedied by pinching; for instance, when we cut a leading shoot or a side-shoot, expecting all, or nearly all, the buds below the point where we cut, to break and make side-shoots or spurs, and, contrary to our expectations, only two or three at the extremity grow, leaving the others dormant. To make these lower buds break, we must pinch those above them at a very early day. This checks the flow of sap, and concentrates it in the lower parts, causing the buds there to break. This is the way to have all the branches covered with fruit-spurs their whole length. Pyramidal pear-trees on *quince* stocks are naturally so fruitful, generally speaking, that pinching to form fruit-buds and spurs is rarely necessary. The principal point to keep in view is the *form*. On pear stocks, however, both objects must be kept in view. All we have suggested on this point will be necessary in both cases. Pinching to promote fruitfulness, consists in pinching or breaking off the ends of the small side-shoots, stopping their elongation, and turning the sap into the formation of fruit-buds. This is practised continually as growth advances, and the condition of the trees renders it proper, principally through July and August.

This pinching, to promote fruitfulness, requires more skill and practice in pruning, and much more physical information respecting trees, than any other pruning. If done too soon, or too severely, the object is defeated by having the buds break into new shoots, instead of forming fruit-buds, thus requiring pinching and pinching again, before the object is attained. Vigorous and feeble growers require different degrees of pinching, and require it to be done at different seasons. Different soils and climates all affect this matter so much, that no general rules can be safely adopted. Some rank growers on free stocks cannot be brought into bearing by this means, until the pinching and pruning are so severe as to weaken, to some extent, the whole force of the tree. Root-pruning has the same effect, and, in such cases, is quite necessary; but this must be done in the fall, when growth has terminated. — *American Agriculturist.*

WHAT FARMERS OUGHT TO KNOW.

Let us see what farmers ought to know and do, to raise themselves to the character of professional men; and what almost any of them might accomplish in the long winter evenings, at a trifling cost for books, and a little more expense of hard thought and attention.

A farmer ought to understand the leading principles of chemistry. The soil he plods among at the plough-tail is not a mere inactive mass, sticking to his shoes when wet, and choking him with dust when dry. It is a vast laboratory, full of many and strange materials, always in action, warring, combining, changing, perpetually; to-day receiving accessions from the heavens; to-morrow pouring them into the wide sea, to be again supplied to other lands. The earth is all but a living creature; and he whose business has been slanderously said to be but "of the earth, earthy," should surely understand the soil's nature, its elements, its likings, and its diseases.

The farmer should understand physiology. Under his care he has the noblest forms of creation — the ox, the horse, the sheep. Can he spend a life among them, and not know how the heart beats — how the nerves thrill — where lie the muscles — what are the principles of action, and the seats of disease — how the fat grows — and how the bones are formed? Can he be a breeder, who has never studied the peculiarities of races? Can he be any thing but an empiric, who undertakes to feed and fatten cattle, without knowing of what the food is composed, and what parts of the body require this or that element?

The farmer should have a knowledge of medicine, and of the elements of surgery; for though, in this respect, when applied to human ailments, it may prove that "a little knowledge is a dangerous thing," yet many a fine animal is allowed to become dog's meat, because its owner could not distinguish between a fever and an inflammation, set a bone, nor bandage a wound.

The farmer should be a botanist. The primeval curse of mother earth was, that she should bring forth thorns and thistles; and many other noxious weeds, besides, have since been added to her progeny. How great the amount of toil expended, and how serious the loss of crops, from such plants as Canada thistle, burdocks, Turkey weed, and a host of others, let those tell who have been the sufferers. Many books have been written on such things; many plans have been given for eradicating them; but unless the farmer can distinguish them — unless he knows their character, histories, and modes of growth, how unaided does he go to his task! Besides, botany, in all its shapes, is the natural science of the countryman. How does the seed germinate? How does the tender leaf unfold itself? How is the blossom impregnated and the fruit formed? What will injure, what improve each plant? All these are questions which every farmer should have studied and ascertained. And can any one be content to spend a life in ignorance of the names and characters of the trees and flowers that are so gorgeously spread around him, painting his fields and woods with their thousand hues, and rendering this outward world a mass of beauty?

The farmer should be — or, shall we say, should wish to be — a naturalist. No one has so many opportunities of observing and noting the habits and peculiarities of animals, birds, and insects. In some cases, this knowledge may be of inestimable service. It must always be a pursuit of pleasure, and cannot fail to refine and improve the mind and sensibilities, both towards the inferior creation, and towards man.

But time would fail to tell of what the farmer ought to know and understand. There is no knowledge which would not be serviceable to him. There is none which will not elevate him in the scale of intellectual beings; and, what, perhaps, is more important to many, there is scarcely a physical science which he will not find putting money into his pocket constantly. How many times in a life would a barometer save a whole harvest! How many blacksmiths' and carpenters' bills may be escaped by the humble knowledge of the use of tools! Now, if our farmers would but become self-instructors, and if, instead of doing just as their great-grandfathers did before them, they would think and learn for themselves, no profession would become more honorable, carry more weight in society, nor be more ardently sought after by the active and intelligent of all classes. Instead of our young men rushing from the country to the city, the city youths would yearn to be farmers; and instead of the chief emulation being who should save most, the strife would be who should accumulate the most by the profoundest experiments, most successfully carried into practice. By these means, farming would cease to be the mere drudgery of "dirty-handed industry;" and every operation would become scientific, based on great principles, breeding new thoughts and new results, and ending in valuable acquisitions. Instead of the poet describing the farmer as one who

> "Wandered on, unknowing what he sought,
> And whistled as he went, for want of thought,"

we should have farmers themselves distinguished authors of valuable works; scientific, at all events, if not poetic. Some such great minds we already have employed in farming, but, unfortunately, that is not yet the character of the class. G. F.

MICHIGAN, *Jan.* 5, 1850.

— *Am. Agricult.*

SHADE-TREES.

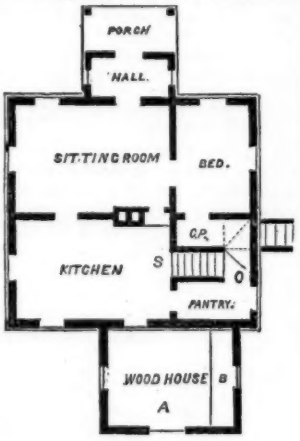
SILVER MAPLE, (*Acer dasycarpium.*) — This should occupy a conspicuous place in the highways and public grounds. It is a native of our state, and is found in moist, sandy soils, particularly along the margins of streams. To its graceful form and rich tints much of the beauty of the landscape-views along the Ohio, Muskingum, and other large rivers, is owing. It is more hardy than the sugar maple, and adapts itself to all varieties of soil. The inhabitants of cities and villages at the west should employ it instead of the sickly and filthy locust-tree. — *Family Visitor.*

Decayed grain, of any kind, is highly injurious to stock. It has a paralyzing effect upon the animal fed with it, oftentimes causing death.

DESIGN FOR A COTTAGE.

We copy the following interesting article from the Albany Cultivator, and are indebted to Mr. Tucker for the accompanying engraving and plans: —

Eds. Cultivator: Enclosed is a plan and perspective view of a small farm-house. It will be seen by a glance at the plan, that the house is nearly square — the cheapest of all forms. The size is twenty-nine by twenty-six feet, with a hall and porch, together ten feet square, and a wood-house in the rear, twelve by sixteen feet. The hall is placed in the middle of the front, and may be lighted by a window on each side, of the width of one glass, or by a window in the door. From the hall, we enter the sitting room, which is twelve and a half feet wide by eighteen and a half long, lighted by two windows, and has a crockery closet at *c*. At the left, as we enter, is a bedroom, nine by twelve and a half feet, with a large clothes-press under the stairs: passing through, we enter the kitchen, twelve by eighteen and a half feet, which is lighted by two windows, and has doors opening to the pantry, stairway, and wood-house. The pantry (five feet by nine) is lighted by one window, and has a door at *o*, opening on the cellar stairs. In the wood-house, A, is an opening for throwing in wood, six or seven feet from the floor, four feet square, closed by a door; B is a work-bench, with a window over it.

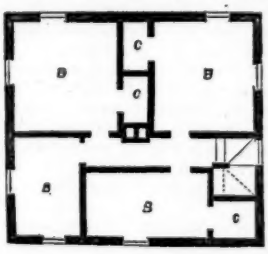


FIRST FLOOR.

On the second floor are four fine bedrooms, three of which have commodious closets. The garret can be reached through a scuttle near the chimney, by means of a light ladder, which, when not in use, might be placed against the wall at L. The first floor is intended to be nine feet high, the second eight. The cellar might be made under the whole house, or only under the back half. O is the outside cellar stairway.

It will be objected by many, that this house has no parlor. This plan is not intended for those who have the means to build a room *especially for company*, but for that large class of farmers who, while they desire something convenient and tasteful, cannot afford to pay for a room which they do not use themselves.

A glance at the plan will show that it is intended to be built of wood. For the outside covering, perpendicular boarding is preferable to clapboarding, because it is firmer and cheaper. I hope the exterior that I have sketched is sufficiently expressive of ruralness. Although the desire for novelty, and the wand of fashion, have done much towards creating the prevalent rage for rural Gothic dwellings, yet the intrinsic beauties of the style will always command for it the admiration of the rural architect, and it has now become so common in most parts of our country, as no longer to be considered a fantastic novelty by the staid portion of our people. All who examine the various forms of domestic architecture can now easily have opportunities of seeing its beauties and detecting its faults.



SECOND FLOOR.

The features which designate principally the style of this building, are the verge-boards and the bold projection of the roof. (The roof in the engraving is represented hardly steep enough for the style.) To support this projection, the rafters (which should be of rather large size, say six by four inches) should

run past the plate their whole size, about eighteen inches or two feet.

The square end of the rafter is, I think, a decidedly ornamental feature of the otherwise plain eaves. The verge-boards I have represented in the heaviest style that is admissible, because any but *substantial-looking* ornaments are out of place on a farm-house, and as a kind of example to operate against the other extreme — flimsiness. The only finish necessary for the roof projection, is, that the roof-boards over the projecting part should be of inch and a half stuff, (to prevent the shingle nails from coming through,) planed on the under side, and matched. The eave-trough might be of tin and nailed to the roof, or formed by nailing a narrow board to the edge of the lower roof-board. The ceiling of the porch should be made in the same way as the roof projection; the posts of six inch stuff, made octagonal by trimming off the corners, the top and bottom being left square. The front door I have represented in the drawing as pointed. As, however, there is no other feature of the kind in the house, I have come to the conclusion that it looks ambitious and out of place, and I beg leave to have the reader consider it square. To the chimney I have sought to give an ornamental effect, by capping it with two slabs of stone.

I will conclude with a few words in regard to the interior finish. In all parts of our country *pine* is the material most used for the interior wood-work of dwellings, and it is a common practice to cover it with white paint. How such a practice could ever have obtained among an intelligent people, I cannot understand. Its warm, lively color, when freshly planed, is peculiarly adapted to give rooms a cheerful and smiling expression. When we know that this pleasing tint can easily be preserved, and rendered even more soft and bright, by varnish, at no greater expense than would be incurred in giving it a good coat of paint, can we help being surprised that its beauties have been so long carefully concealed by the cold glare of white paint? Besides, the color of the pine, as brought out and preserved by varnish, harmonizes with furniture much better than any paint, and would of itself add much, apparently, to the furniture of a room. Darkened and mellowed by time, it would, at length, with the inmates of the house, assume that sober, though still cheerful, expression, which gives to age one of its greatest charms.

While on this subject, I will say a word about black walnut, which, where the intention has been to varnish, has been used more than any other wood for the interior finishing. It has been much used in cabinet work, and is one of the most beautiful of our native woods. Its dark, rich shades impart to the lofty apartments of mansions a stately and appropriate dignity; but for the rooms of ordinary residences, its sombre hue renders it quite inappropriate. And were I to have the choice of two evils, I would prefer white paint with its glare, to black walnut in its gloom.

F. J. SCOTT.

Toledo, Ohio.

SALT FOR FRUIT-TREES—FATAL EXPERIMENT.

Friend Bateham: For the information of your readers, I will relate a disastrous incident that has happened to me. Having learned, from agricultural papers and otherwise, that common salt is a good manure, especially for fruit-trees, and also a preventive of injury by insects, and being determined to have a good orchard of the best fruit that I could get, I had procured two hundred fruit-trees, mainly apples, but some pear and peach; and in planting my trees, I threw into the hole, and touching all round the roots of each tree, about half or three quarters of a pound of salt; the result was, that the salt killed every tree around which it was put.

The sap carried the salt up to the very top buds of the tree, so as to be tasted in them. Some persons have thought that it might not have been the salt that killed the trees; but there can be no mistake that it was the salt that killed them, as I had planted six trees before the salt was brought into the field, and one other tree was missed and no salt was put about it, and these seven trees not salted are alive and growing finely.

I do not wish to discourage people from using salt as a manure, but to caution them against using it as freely and in the manner that I did. I think that if salt be mixed with rich mould soil, or manure, and not allowed to touch the roots of the trees, and especially not in large quantities, in its crude state, it may be used with safety and advantage.

On the 22d and 23d insts. the fruit in this vicinity was greatly damaged by frost, but not all killed. Wheat looks well. Our meadows are very backward. Corn is coming up badly, on account of the dry weather and frosts. Early-planted corn and potatoes are much injured by the frost; so are beans, cucumbers, and garden plants generally.

Yours very respectfully,

JOHN FOSTER.

Cumberland, Guernsey Co., O., *May* 28.

Remarks. — We truly sympathize with friend Foster in view of his misfortune, and thank him for the caution which his experiment affords to others. If he had observed what was said on this subject in our paper last year, (p. 218,) we think he would have not made the mistake he did; and, in fact, we have never, to our knowledge, seen the practice recommended of applying salt to newly-planted trees; especially should it not be applied in the soil directly in contact with the roots, as in its crude state it is poisonous to vegetation; while, in a diluted state, (dissolved by rains and incorporated with the soil,) it is found beneficial, *applied in moderate quantities to trees of bearing size.* — Ed. — *Ohio Cultivator.*

FOURTH ANNUAL REPORT OF THE BOARD OF AGRICULTURE OF THE STATE OF OHIO.

We have received this report, which makes a good volume, of nearly 300 pages. It is truly gratifying to see how rapidly agricultural improvement is progressing in Ohio. Nothing shows it better than the increased size of these reports, coming, as a great bulk of its contents do, from the several counties, and giving a good history of the leading crops in each, by actual residents. For accurate information as to the real condition of agriculture through the state, we consider this volume entirely ahead of our own more bulky Transactions. The state of Ohio will owe an immense debt to a few men, who have stuck to the Board of Agriculture until they have succeeded in arousing a feeling among the farmers that will make them second to those of no other state. We predict for their great fair at Cincinnati, on the 11th, 12th, and 13th of September next, an exhibition that New York might well be proud of.

And why should not Ohio be foremost among the first? There is no state in the Union that possesses, to so great an extent, all the elements of boundless prosperity that she does; and we hope her citizens will not allow her resources to remain long undeveloped. The first great step towards it is to build up her agriculture. The real wealth of this world lies within a foot of the surface of the earth. If any man doubts, let him dig. — *Wool-Grower.*

Domestic Department.

For the New England Farmer.

FLOWERS.

Who does not love flowers? They are such pure and beautiful things, such sweet gifts from our heavenly Father, scattered with lavish hand to gladden the hearts of his creatures! Not for the wealthy alone do they bloom, but the lowliest cottager may claim them as his own, to beautify his humble home. I never passed a cottage overhung by vines, where roses and honeysuckles mingled, and jessamine peeped in at the windows, without thinking that there must be, in that lowly abode, hearts full of love — love for the beautiful, and love for God. How pleasant to see young children bearing their hands full of the fragrant treasures — twining them in garlands for those they love, or scattering them over some lonely grave!

Methinks that children surrounded with flowers — taught daily to gaze upon them and examine and admire their wonderful structure — cannot grow up unmindful of their Maker. In their hearts will be planted an affection for the lovely and beautiful in Nature, and they will "look through Nature up to Nature's God."

"Blessed be God for flowers —
For the bright, gentle, holy thoughts that breathe
From out their odorous beauty, like a wreath
Of sunshine on life's hours."

E. C. L.

Milk Cellars. — Farmers about to build a dwelling should know that, by carrying up a large flue (twelve inches in diameter and *circular* is the best) in the chimney-stack from the *cellar*, and having a window or two opening to the north, or cold side of the house, out of the cellar, they can have as good a "milk room" under their house as could be had over a spring, that may be perhaps two hundred yards or one fourth of a mile off; which is so *pleasant* to go to in *bad* weather, especially by the *female* portion of the family.

The floor should be flagged with stones, as they can be kept sweeter and are colder than either bricks or cement, which absorb "spilt milk," and thus taint the atmosphere. The walls and ceiling should be plastered, to facilitate whitewashing and cleansing. Nothing but milk and cream should be kept in the room, as a pure atmosphere for cream to rise in is absolutely essential to the making of sweet butter.

What is needed to have a *cool, sweet cellar*, is a current of air, which will be secured by the aforesaid flue and the open windows — as a strong current of air is at least ten degrees colder than the same air at *rest*.

Churning. — Farmers ought to know that churning can be done with any good churn in five to fifteen minutes, as well in winter as summer, by having the temperature of the cream right — say sixty to sixty-two degrees. The temperature of an ordinary sitting or living room, in winter, to be comfortable, is sixty-five to sixty-eight degrees, and a closet opening into such a room would be the best place to keep the pot in the winter. In the summer the cream can be readily reduced to the right temperature, by breaking up clean ice and putting it into the churn.

A thermometer, which is necessary to regulate these matters, costs but one dollar; and such an investment every farmer ought to make, who has churning to do, and thus save labor and time, which is money, and make this much-dreaded part of the duties of farmers' wives and daughters much pleasanter and easier — and for this I know they would thank your modest correspondent, if they knew him. — *Ohio Cultivator.*

Youth's Department.

Curious Facts. — The greyhound runs by eyesight only; and this we observe as a fact. The carrier-pigeon flies his two hundred and fifty miles homeward, by eyesight, viz., from point to point of objects which he has *marked;* but this is only our conjecture. The fierce dragon-fly, with twelve thousand lenses in his eyes, darts from angle to angle with the rapidity of a flashing sword, and as rapidly darts back; not turning in the air, but with a clash reversing the action of his wings — the only known creature that possesses this faculty. His sight, then, both forwards and backwards, must be proportionably rapid with his wings, and instantaneously calculating the distance of objects, or he would dash himself to pieces. But in what conformation of his eye does this consist? No one can answer. A cloud of ten thousand gnats dance up and down in the sun, the minutest interval between them, yet no one knocks another headlong upon the grass, or breaks a leg or a wing, long and delicate as these are. Suddenly, amidst your admiration of this matchless dance, a peculiarly high-shouldered, vicious gnat, with long, pale, pendent nose, darts out of the rising and falling cloud, and settling on your cheek, inserts a poisonous sting. What possessed the little wretch to do this? No one knows.

A four-horse coach comes suddenly upon a flock of geese on a narrow road, and drives straight through the middle of them. A goose was never yet fairly run over; nor a duck. They are under the very wheels and hoofs, and yet, somehow, they contrive to flap and waddle safely off. Habitually stupid, heavy, and indolent, they are, nevertheless, equal to any emergency. Why does the lonely woodpecker, when he descends his tree, and goes to drink, stop several times on his way, listen, and look round before he takes his draught? No one knows. How is it that the species of ant, which is taken in battle by other ants to be made slaves, should be the black, or negro-ant? No one knows.

A large species of the star-fish possesses the power of breaking itself into fragments, under the influence of terror, rage, or despair. "As it does not generally break up," says Prof. Forbes, "before it is raised above the surface of the sea, cautiously and anxiously I sunk my bucket, and proceeded in the most gentle manner to introduce *Ludia* to the purer element. Whether the cold air was too much for him, or the sight of the bucket too terrific, I know not; but in a moment he proceeded to dissolve his corporation, and at every mesh of the dredge his fragments were seen escaping. In despair I grasped at the largest, and brought up the extremity of an arm with its terminating eye, the spinous eyelid of which opened and closed with something like a wink of derision." With this exquisite specimen of natural history wonders — for naturalists can only vouch that "such is the fact," and admit that they know no more — we shall close our digression. — *The Poor Artist.*

As a man is, under God, the master of his own fortune, so he is the master of his own mind. The Creator has so constituted the human intellect, that it can only grow by its own action, and by its own action it will certainly and necessarily grow. Every man must educate himself.

Health Department.

To stop a Fit of Coughing. — A correspondent of the London Medical Gazette states that, to close the nostrils with the thumb and finger during expiration, leaving them free during inspiration, will relieve a fit of coughing in a short time. In addition to the above, we state, from personal knowledge, that to press the finger on the upper lip, just below the nose, will make the severest premonitory symptoms of a *sneeze* pass off harmless. We have found the remedy useful many a time in creeping on game in the woods.

Love of Water. — Some persons shrink from bathing, but when they once get used to it, it is indispensable. A medical writer says, —

"Let a child wash himself all over every morning for sixteen years, and he will as soon go without his breakfast as his bath."

Mechanics' Department, Arts, &c.

Dyeing Woods. — For dyeing wood a *fine black* color, have a chairmaker's copper fixed, into which put six pounds of chip logwood, and as many veneers as it will conveniently hold, without pressing too tight; fill it with water, and let it boil slowly for about three hours; then add half a pound of powdered verdigris, half a pound of copperas, and four ounces of bruised nutgalls, filling the copper up as the water evaporates; let it boil gently two hours each day till you find the wood to be dyed through, which, according to the kind, will be in more or less time.

Fine Blue. — Take a clean glass bottle, into which put one pound of oil of vitriol; then take four ounces of the best indigo, pounded in a mortar; put them into a vial, (take care to set the bottle in a basin or earthen glazed pan, as it will ferment;) after it is quite dissolved, provide an earthen or wooden vessel, so constructed that it will conveniently hold the veneers you wish to dye; fill it rather more than one third with water, into which pour as much of the vitriol and indigo, stirring it about, as will make a fine blue, which you may know by trying it with a piece of white wood; put in your veneers, and let them remain till the color has struck through.

The color will be much better if the solution of indigo in vitriol is kept a few weeks before using it; also the best trough you can use, is one made of stone ware.

Fine Yellow. — Take of the root of barberry four pounds, reduce it, by sawing, to dust, which put into a copper or brass trough, add four ounces of turmeric, to which put four gallons of water, then put in as many white veneers as the liquor will cover; boil them together three hours, often turning them; when cool, add two ounces of muriate of tin, and you will find the dye strike through much sooner.

Fustic and quercitron will also dye good colors, the former with alum, the latter with muriate of tin.

Bright Green. — Proceed, as in the above recipe, to produce a yellow with fustic, and add the vitriolated indigo, as much as will produce the desired color.

Bright Red. — Take two pounds of genuine Brazil dust, add four gallons of water, and after putting in your veneers, boil them well for at least three hours; then add two ounces of alum and a little salts of tin, and keep it lukewarm until it has struck entirely through.

Purple. — Take two pounds of chip logwood and half a pound of Brazil dust, add four gallons of water, and after putting in your veneers, boil them well for at least three hours, then add six ounces of pearlash and two ounces of alum, and let them boil two or three hours every day till you find the color struck through.

The Brazil dust in this recipe is perhaps superfluous, as it only contributes to make the purple of a red cast; use muriate of tin very little.

Orange. — Let the veneers be dyed, by either of the methods given, of a fine deep yellow, and while they are still wet and saturated with the dye, transfer them to the bright red dye, till you find the color has penetrated equally throughout.

NEGLECTED MANURES.

LIQUID MANURES, TANKS, &c.

Analytical Laboratory, Yale College,
New Haven, Conn., *June*, 1850.

Eds. Cultivator: Having now mentioned, in succession, a variety of manures in a number of classes, — having called attention to the fact of their being almost universally neglected, and to the leading characteristics which in the several cases constituted their chief value, — I propose to leave this subject, lest your readers should find it becoming tedious. It is far from being exhausted; indeed, it is but begun: still, enough has been said to call into exercise, on the part of attentive readers, a spirit of watchfulness, that nothing worth saving shall escape them in future.

In the present letter, I shall notice the great waste of liquid manure which occurs in many parts of the country, and the imperfect methods of attempting to preserve it, which are often adopted.

Chemical analysis shows the liquid manure, or urine, of animals, to contain many valuable fertilizing substances. It is always particularly rich in nitrogen, also in the alkalies, potash, and soda, and in carbonic and sulphuric acids. The excrements of birds contain both the liquid and the solid part together; hence their great richness: this fact alone should convince the farmer that, in losing the liquid, he greatly reduces the value of his solid manures.

The nitrogen in fresh urine exists there chiefly in the form of a substance called urea: this consists in a large part of nitrogen, and, if dry, may be exposed to the air for a long time, before it undergoes any perceptible change. In the presence of water, however, and the other substances with which it is associated in urine, a species of fermentation soon commences; it is then speedily changed into carbonate of ammonia, which readily escapes into the atmosphere. In warm weather, the smell of this ammonia escaping may be perceived after the lapse of a very few hours. If the fermentation be allowed to proceed, the whole of the nitrogen will be transformed into carbonate of ammonia, and the larger part of this will evaporate into the air. If this constituent can all be retained, and the liquid applied to the crops, it is found to be a powerful manure. Prof. Johnston states that at Flanders the urine of each cow is valued at about $10 per annum.

Scarcely less valuable are the drainings from the dung-heaps, or from barn-yards. These contain large quantities of ammoniacal substances, and also of useful mineral ingredients, dissolved out from the solid parts of the manures. They undergo the same fermentation as urine, but more slowly, and the ammonia also escapes in this case. Where the manure, as is to be seen in many yards, is exposed to constant washing by rains, nearly every thing soluble in water is gradually dissolved out, and it is thus rendered quite inferior in quality.

The question now arises, How are these valuable liquids to be preserved? and how is the loss of their ammonia to be prevented? The method of accomplishing this, may vary with circumstances and situation.

Where it is practicable to build the barn upon a side-hill, there is probably no better plan than to form a cellar beneath it, where all of the solid manure can be thrown from above, and the liquid conducted down upon it. A layer of peat or muck upon the floor would prevent any thing from soaking through and escaping. In certain situations, manure kept in this way becomes too dry, and does not decompose properly; in all such cases the liquid manure would be doubly valuable. Some farmers turn in hogs to root over and compost the material in such cellars. Manure made in this way is neither exposed to evaporation nor to washing; and one load is worth two, or even more, of the bleached and washed straw and stalks, which we see being carted out from some yards. If it ferments too much, it is necessary to turn it over to check fermentation; mixing earth and sprinkling plaster over the top is also a good practice.

In cases where the formation of the ground does not admit of a convenient cellar under the barn, a *tank* is the most advantageous receptacle for the liquid drainage. This may be made by digging a square hole at the lowest part of the premises, and rendering it water-tight by a lining of planks, brick, or stone. This is far better than an open hollow, such as may be seen in many yards. These are not only disagreeable to the eye, and a source of many inconveniences, but they expose the liquid to the full evaporating and decomposing influences of the sun, so that it decreases and deteriorates in a very rapid manner.

Many farmers think that a tank must necessarily be made of great size, or it will overflow. If all the water from the eaves of the farm-buildings be allowed to flow into it, such a necessity exists; but if this water is carried away by separate drains, as it should be, then the quantity flowing into the tank cannot be excessive. During the summer, except where much stock is kept, or after showers, little liquid would be collected, especially if the yard were spread with muck. Where there is much stock, a drain should be made to lead their urine directly into the tank.

The next question that arises is relative to the disposition of this liquid from various sources, after we have got it into the tank. From what has been said, it will be seen that it is extremely liable to ferment and putrefy, and to lose a large portion of its most valuable ingredients; this will not happen quite so soon in a covered tank as in the open air, under the influence of the sun, but still it cannot, during warm weather, be delayed long. There are several methods of treatment which have been found successful.

Some farmers mix two or three times its bulk of water, thus retarding the fermentation until they have leisure to distribute the liquid over their fields, with a common water-cart. In most cases this would be a troublesome mode of management. A more convenient way is to pump it up, and pour it upon the surface of manure and compost heaps, sprinkling them over with gypsum at the same time.

Where neither of these plans will answer, it is quite practicable to preserve the ammonia by sprinkling in occasionally a little sulphuric acid, say one or two pints; this converts the carbonate of ammonia into the sulphate of ammonia, a compound far less volatile than the carbonate. The same effect may be produced by adding gypsum or sulphate of lime; sulphate of ammonia is formed in this case also. The propensity that gypsum has to form this compound, when it is brought into contact with ammonia, explains its beneficial action in arresting the escape of that gas from fermenting manure heaps. Even when ammonia is rising so as to be visible in white fumes, and perceptible to the smell, a sprinkling of gypsum will arrest all further escape for a considerable length of time.

In situations where it is convenient to employ them, peat, peat ashes, wood or coal ashes, rich mould, &c., are good materials to throw into these tanks; they will absorb nearly all of the valuable parts of the manure. The tank soon fills up in this case, and must be cleaned out at comparatively short intervals.

These methods of using the liquids from the barn-yard and the stables are all perfectly simple and practicable, while at the same time they involve little expense. The manure saved is of the most powerful character, and will, upon trial, be found to add very greatly to the resources of any farm.

The subject of water from the sewers of towns has lately attracted much attention in England, and Prince Albert has quite recently made public a plan for extracting, on a large scale, the valuable substances which it contains. He proposes a large upward filter; that is, to bring the water into a receptacle under such a head as to force it upward through a filter of sand and gravel. The clear water passes off above, and the solid matter remains below the filter, to be taken out and used for manure. I think that certain practical difficulties would attend the working of this plan, and the prince seems to have overlooked the fact, that the clear water, which runs away, contains every thing that is soluble in water, and of course much that it is important to preserve. In any case, the system would be too expensive for this country, but is worthy of mention as showing how much value is placed upon this species of refuse abroad. Wherever land lies so that it can be irrigated from the sewers of large towns, such irrigation will be found a most effectual and economical method of enriching it.

For my next communication I shall endeavor to select some more savory subject than has occupied our attention in the preceding letters of this series.

JOHN P. NORTON.

— *Albany Cultivator.*

MANURES—WHAT FARMERS OUGHT TO KNOW.

The annual waste of valuable manures by farmers makes, in the aggregate, an immense sum. Suppose it to be but five dollars' worth (a low estimate) for each one in the county, and in the whole it will amount to thousands.

Waste is the consequence of carelessness. Loads of vegetable matter are suffered to be scattered about in by-places, and never collected for use. Draining from the yards (perhaps to a running brook) is another process of gradual waste. The soluble manures thus carried off are of more immediate value to the growing crops than the remaining solid portions, the latter having to decompose and be dissolved in water before plants receive any benefit from them.

Some have so little regard for the animal excrements, that the cattle and sheep are permitted to roam at pleasure, during the winter and spring; and, in too many instances, wander about the highways. The hay and cornstalks are often fed in these places, and such portions as the cattle refuse to eat are lost, because never gathered up; and the droppings also remain, as though the laws of the country required the wagon-track to be a rich soil. Many places may be seen where there is quite as much manure in the road adjoining barns as in the yards.

It is a common custom, in villages, to enrich the gardens in the spring with the best manures, costing a high price; and then, during the summer, men are hired to throw that same manure (now concentrated into plants called weeds) into the street, as if they were noxious articles. Carry them to the manure heap, and give them as much attention as the cleanings of the stable.

Dead animals are carted to hollows and by-places, as remote as possible, and left to be eaten by crows and other animals, or to decay and render the surrounding atmosphere unpleasant and unwholesome. This is not good economy. Take the carcass to some convenient place, where you can give it a good covering of earth. As decay progresses, the flesh passes into gases, which are taken up by the soil, and thereby the earth forming the covering is rendered more fertilizing than the matter taken from the barn-yard. Thus the farmer can manufacture eight or ten loads of rich compost, with little expense or trouble, and cheaper than any other process. The bones are not to be disregarded. Have them put into a convenient place, and when a rainy day comes, break them up in small pieces, and scatter them on your lands. They are much used for wheat, corn, and turnip crops. Bone-dust, in some portions of our country, is considered an indispensable article, and in England is in very general use. Human bones have been gathered on the battle-field of Waterloo, and carried to England by ship-loads, there to be used for manuring land. They are considered of sufficient value to be transported from this country to England for that purpose.

Save your soap-suds. Instead of throwing them near the kitchen door, to form an offensive mud-hole, pour them on the manure heap, or sprinkle them on the meadow. Make but one trial of it, and you will not again cast them away as useless. Leached ashes are supposed to be of little value — an entirely erroneous opinion. Coal ashes are also condemned, and cast into the streets. They are an active promoter of vegetation, and, hence, worth saving.

If you would raise good crops, they must be fed. All vegetable matter which will decay, affords nourishment, producing cash in the shape of grain, &c.; therefore look after it as carefully as you do the sixpences in the purse. — *Deckertown Home Journal.*

MANAGEMENT OF NEWLY-TRANSPLANTED TREES.

The season thus far has been quite auspicious for success in transplanting trees; yet they should not now be neglected, but they should be well mulched, to keep the earth loose and moist, in case a drought should ensue. Apple-trees of good quality, well set, may be considered worth not less than one dollar each — enough to take care of.

It is evident that nature proportions the roots and tops of trees so as to balance: the roots searching out and furnishing nourishment sufficient for the top or branches; but when trees are transplanted, more or less of the roots are left in the ground, and not unfrequently many of the small fibres become so dried as to unfit them for performing their office as feeders, (which ought not so to be;) nature's course must become checked in the vigorous growth of the tree. It must therefore be evident that advantage will be derived from lessening the tops, so as not to impose a tax upon the roots, which their feeble condition will not allow them to pay. It is probable that, in most cases, the tree would live if the top should not be reduced, but often the struggle between life and death, for a time, is doubtful; and if the former obtains the victory, it is but a pitiful one — the tree not having made any growth, in which case it seldom recovers enough to flourish well the succeeding season. In most cases, trees, when transplanted, require some thinning of their tops to give them a good, open, and spreading head, which is essential to the good quality of the fruit.

But when they do not require thinning, heading back, or the shortening system, as it may be called, may be practised to advantage. It is generally an easy matter to form and obtain a good head, where there are healthy and flourishing roots to feed and drive it forward; and *vice versa.* D. T.

Vassalboro', *6th mo.*, 1850.

— *Maine Farmer.*

HOW CITIES EXHAUST THE FERTILITY OF LAND.

There has been enough of the elements of bread and meat, wool and cotton, drawn from the surface of the earth, sent to London, and buried in the ground or washed into the Thames, to feed and clothe the entire population of the world for a century, under a wise system of agriculture and horticulture. Down to this day, great cities have ever been the worst desolators of the earth. It is for this that they have been so frequently buried many feet beneath the rubbish of their idols of brick, stone, and mortar, to be exhumed in after ages by some antiquarian Layard. Their inhabitants violated the laws of nature, which govern the health of man and secure the enduring productiveness of the soil. How few comprehend the fact, that it is only the elements of bread and meat, evolved during the decomposition of some vegetable or animal substance, that poison the air taken into human lungs, and the water that enters the human system in daily food and drink! These generate pestilence, and bring millions prematurely to their graves.

Why should the precious atoms of potash, which organized the starch in all the flour, meal, and potatoes consumed in the cities of the United States in the year 1850, be lost forever to the world? Can a man create a new atom of potash or of phosphorus when the supply fails in the soil, as fail it must, under our present system of farm economy? Many a broad desert in Eastern Asia once gladdened the husbandman with golden harvests. While America is the only country on the globe where every human being has enough to eat, and millions are coming here for bread, how long shall we continue to impoverish ninety-nine acres in a hundred of all that we cultivate? Both pestilence and famine are the offspring of ignorance. Rural science is not a mere plaything for the amusement of grown-up children. It is a new revelation of the wisdom and goodness of Providence, a humanizing power which is destined to elevate man an immeasurable distance above his present condition. To achieve this result, the light of science must not be confined to colleges; it must enter and illuminate the dwelling of every farmer and mechanic. The knowledge of the few, no matter how profound, nor how brilliant, can never compensate for the loss sustained by neglecting to develop the intellects of the many.

No government should be wanting in sympathy with the people, whether the object be the prevention of disease, the improvement of land, or the education of the masses. One per cent. of the money now annually lost by reason of popular ignorance, would suffice to remove that ignorance. — *Patent Office Report.*

Retire early, and rise early.

INFLAMMATION OF THE LUNGS IN HORSES.

The transportation of live stock by railroad has been latterly much adopted on the principal lines in this country. It is, in many cases, cheaper to convey animals in this way, besides avoiding the great loss of weight which takes place, especially in fat animals, when they are obliged to travel to market. The present season, many horses destined for sale in New York and Boston have been brought to Albany by railroad from Western New York. On reaching Albany, it has been common for them to tarry several days, in order to appear in the market in the best possible condition. Many of these horses, while stopping here, have been attacked with inflammation of the lungs, which, in several cases, has terminated fatally. The disease has sometimes been so violent and rapid in its progress, that death has ensued within twenty-four hours. We are informed that the frequent occurrence of this disease in horses brought by railroad has been a discouragement to that mode of conveyance. Without pretending to a particular knowledge of the circumstances, we will venture to suggest that the primary cause of the disease is the confinement of the animals in a heated and vitiated atmosphere in the cars. Their sudden transfer to the open air, or to an atmosphere of much lower temperature, produces the effect so well described by Youatt: "The discharge from the skin is at once arrested, and the revulsion, or pernicious effect of the sudden stoppage of a natural evacuation, falls on the lungs, too much weakened and disposed to inflammation by heated air and poisonous fumes." The first difficulty is probably accelerated, in many instances, by overfeeding and want of exercise.

As a prevention of the disease, the better accommodation of the horses in their railroad transit should be the first object. The next should be to feed moderately, using constant care in regard to the protection of the animal from the effects of the changes of temperature, giving daily exercise, with good grooming. Should the evacuations from the bowels indicate constipation, the administration of simple cathartics will be safe. A dose of Epsom or Glauber's salts — half a pound to a pound, according to the symptoms — may be given. But, in a disease of so important a character, it will be safest, when it makes its appearance, to intrust the animal to a skilful veterinarian. — *Albany Cultivator.*

IMPROVED STOCK — SHEEP.

Mr. Freas: On this important subject most intelligent farmers at this day manifest a laudable and deep interest. The position assumed by the agricultural press is rapidly arousing attention to it, and our farmers begin to *reason* and *act*, and to denude themselves of their old and long-cherished prejudices, in proportion as the light reflected from the page of science upon their path becomes more luminous and well-defined. As the natural consequence of this, we find that the annual fairs now held in most of the states for the promotion of agricultural improvement, are rapidly increasing in interest; a more decided and generous public spirit is obvious; the animals exhibited are more numerous and of better quality; and far greater pains is taken by farmers generally to render these important institutions worthy of the "great interest," and an honor to the states and counties of whose enterprise and prosperity they speak.

In reference to most valuable animals, the Sheep, the truth of the foregoing observations is strikingly apparent. The old coarse, long-wooled varieties, though possessing value for particular purposes, have already become nearly obsolete. Twenty years ago, no farmer anticipated seeing a Dishley, South Down, or Teeswater animal at these fairs, any more than the farmer of the present day dreams of seeing there the Cashmere goat or the Alpaca. I wish to be distinctly understood in this matter, for I am speaking not of particular localities, where the spirit of generous improvement and emulation dates from a period long antecedent, in point of time, to the commencement of the chronological segment above alluded to, but to the country in general.

At that time we had no agricultural press, and no George III. to encourage honorable efforts. But the fact is now happily far otherwise. Though, in most of the states and territories, legislators remain almost wholly inactive upon the subject, public spirit and enterprise, together with an ever-restless and enlightened press, are accomplishing much in our behalf, and will no doubt supply, in time, the want of legislative patronage and protection, at least to a considerable extent.

And now, Mr. Editor, as many of your agricultural readers are, no doubt, desirous of availing themselves of all the advantages which science and experience so liberally afford to the enlightened in effecting the improvement of their flocks, I beg leave to submit the following observations by that distinguished friend of agriculture, Arthur Young, in reference to selecting sheep. In the first place, Mr. Y. remarks "that the general principles which guided Mr. Bakewell in breeding a beast or a sheep for the butcher, explain his own stock, which is in the highest perfection when examined with an eye to these perfections."

1. "In all his exertions, his aim was to obtain that breed which, with a given amount of food, will give the most profitable meat; that in which the proportion of useful meat to the quantity of offal, is the greatest."

2. Points of the beast. On this plan, the points are those where the valuable joints lie; the rump, the hip, the back, the ribs, and, after these, the flank; but the belly, shoulder, neck, legs, and head should be light, for if a beast has a disposition to fatten, and to be heavy in these, it will be found a deduction from the more valuable points. A beast's neck should be square, flat, and straight, or, if there is any rising, it should be from a disposition to fatten and swell about the rump and hip bones, and the belly should be quite straight, for if it swells it shows a weight in a bad point. He prefers to have the carcass well made, and showing a disposition to fatten in the valuable points. So far on seeing.

3. Feeling. Mr. Bakewell, in order to decide whether a beast has the right disposition to fatten, examines by feeling. His friend, Mr. Culley, who has had an infinite number of beasts go through his hands, agrees entirely with Mr. Bakewell in this circumstance, and when with him in Norfolk and Suffolk, was surprised to find lean bullocks and sheep were absolutely bought there by the *eye* only. So absolutely is the hand necessary in choosing either, that they both agreed that if they must trust to the eye in the light, or to the hand in the dark, they would not hesitate a moment in preferring the latter. The form of the bone, in sheep, is quite hidden; it is the hand alone that can enable us to decide whether the back is flat and broad, and free from ridge on the back bone, or can examine, correctly, if the other points are as they should be. The disposition to fatten is discoverable only by feeling.

Speaking of the sheep generally, the points to examine are the same as in the ox -- flatness, breadth of back, a spreading barrel carcass, with flat belly, and by no means curved or hanging. The essential is the carcass, and a disposition to fatten in the

carcass, and perhaps to have the least tallow on the sides.

The keeping of sheep on most of the upland and hilly farms of this country is, generally speaking, a lucrative business. If selected with reference to their meat-making or wool-producing properties, and with a well-digested system of breeding and management, these animals are rarely debilitated by disease; it is principally owing to neglect and carelessness that they sicken. By most farmers the winter management of the sheep is deemed a matter of trivial importance, whereas the reverse of the proposition is true. If sheep are confined in large numbers, in confined and poorly-ventilated enclosures, with an inadequate supply of pure water, and with poorer food, the legitimate consequence is premature debility, disease, and death. At the period of producing their young, the most assiduous attention should be accorded to the dams. They should be provided with warm quarters, well littered and ventilated, and supplied with food of a generous and strengthening description. The young, when dropped, should be carefully looked after, and food calculated to invigorate the system, and to produce a healthy and vigorous action of the lactescent organs, be liberally supplied to the dams.

In the summer, and during those months when they are permitted to run at large, they require to be carefully watched, especially when depastured in large flocks. The free use of salt is highly beneficial, or a mixture of salt and ashes; and if the forage is shortened by drought, or of an ungenial or innutritious order, the deficiency should be supplied by daily feeds of grain, roots, or by soiling.

As a general rule, however, it is injudicious to crowd them together in large numbers, even where the pastures or ranges are spacious: it is better to divide the lintory into lesser divisions, and to appropriate to a certain number an allotted space. By so doing many unpleasant contingencies will be obviated. Shelter, even in summer, is essential, oftentimes, to the sheep. During this period, showers are often experienced, and exposure to drenching rains, during which the atmospheric temperature suddenly falls to a comparatively low point, often produces disease, and even death.

One error, and a very essential one, in the practice of farmers, I will here notice. After incurring a heavy expense in purchasing valuable animals, many proceed as if they supposed they had actually accomplished all that is necessary. Instead of providing good and secure pastures in which the animals may find abundant and nutritious herbage during their range and isolation from other flocks, they turn them into the highway to be crossed by breeds of inferior traits, and emasculated or half starved from a lack of timely and proper food. The consequence of this insane procedure is, that they are disappointed: the animals, so eagerly sought for and purchased at perhaps an exorbitant price, fail to realize their expectations, and all subsequent efforts, as improvement in that department, are prematurely and forever renounced. This is necessarily an injury to the community; it tends to induce scepticism and unbelief as to the legitimate merit and feasibility of the enterprise, and thereby to discourage all laudable efforts on the part of many who would otherwise have embraced an early opportunity to assist, by their own personal example and influence, the advancement of so good a cause.

A WASHINGTON COUNTY FARMER.

SEVEN HILL FARM, *July* 3, 1850.

— *Germantown Telegraph.*

In Cheshire, Mass., an apple-tree has borne from 90 to 110 bushels of apples in a season.

PROF. ESPY'S THEORY OF STORMS.

As some interest has been awakened here of late on meteorology, we propose to present our readers a brief view of the "*theory* of storms," called the "Espy theory" — so designated to distinguish it from another and kindred theory, named the "Redfield theory." The latter theory, presented by W. C. Redfield, Esq., of New York, is supported by Lieut. Col. Reid, of the Royal Engineers, and Dr. Dove.

Mr. Espy, in his theory, professes to explain all the phenomena of rain, hail, snow, waterspouts, winds, and barometric fluctuations. The following is a brief synopsis of his theory: —

1. Atmospheric air is subject to expansion, — either by heat or by a diminution of pressure.

2. Aqueous vapor is specifically lighter than atmospheric air, — its weight, under given circumstances, being only about five eighths that of air.

3. When a portion of air becomes lighter than the surrounding air, from expansion by heat, from being more highly charged with vapor, or from any other cause, it ascends.

4. Air, in ascending from a lower to a higher region, is subject to diminished pressure, and consequently to expansion.

5. The atmosphere is capable of containing, and does always contain, a certain quantity of water in a state of transparent vapor.

6. This capacity of the atmosphere for containing water increases much more rapidly than the temperature.

7. The quantity of water actually in solution varies greatly at different times and places, independently of the temperature; the air, at a given temperature, sometimes being filled nearly or quite to the extent of its capacity, while at others, it falls far short of it.

8. If, from any cause, the temperature of a portion of air, containing a given quantity of vapor, be reduced to a certain point, that is, at all below the dew-point, it must deposit a portion of the water.

9. Expansion, arising from diminished pressure, is attended by diminished temperature. The actual diminution of temperature, on this account, in ascending from the surface of the earth, is about a degree and a fourth for every hundred yards; and consequently air, highly charged with vapor, that is, with a high dew-point, would not have to ascend very high before condensation must commence.

10. The condensation of vapor is attended with the disengagement of a very large quantity — more than a thousand degrees — of latent caloric. In other words, sufficient caloric is set at liberty, by the condensation of a given quantity of vapor, to raise the temperature of a hundred times that quantity of matter (of the same specific caloric) ten degrees.

Heat is the life-giving element in this theory, as of every other storm theory. W.

— *Rural New-Yorker.*

Advantage of Practice

PHYSICAL INFLUENCE OF HABIT. — Proficiency in all handicrafts is the legitimate result of the physical influence of habits. The blacksmith makes a nail, for instance, well and quickly only after many and often repeated trials. The hand and eye must be educated, habituated to the work, and then they cannot fail. It is so with all mechanical professions. The artisan, by a long apprenticeship, becomes acquainted with the use of the proper tools, and at last the master of his trade, and the habits then acquired, whatever may be his after situation, will influence his whole life.

NOTICES OF PUBLICATIONS.

The Farmer's Every-Day Book; or Sketches of Social Life in the Country; with the Popular Elements of Practical and Theoretical Agriculture, and Twelve Hundred Laconics and Apothegms, relating to Ethics, Religion, and General Literature; also Five Hundred Receipts on Hygeian, Domestic, and Rural Economy. By Rev. John L. Blake, D. D., Author of Family Encyclopædia of General Literature, and a general Biographical Dictionary. Auburn, N. Y.: Derby Miller & Co. 654 pp., octavo. — Among the most interesting and useful works connected with agriculture, this must hold a conspicuous and high rank. Besides a large amount of practical matter, it abounds in valuable articles and sentiments that tend to improve the taste and elevate the farming community. The work is executed in a neat and handsome style, and embellished with beautiful and very appropriate engravings. Dr. Blake has been long and extensively known as a popular author of numerous works, and we are pleased that, with the wisdom of long experience and the ripeness of vigorous age, he has given his attention to agriculture, and has commended and adorned it with his polished pen. This work should not only be in the library of every farmer, but it should hold a prominent place in the library of every family in the country; for it presents ably and truly the importance of agriculture, and the advantages and pleasures of rural pursuits. Our readers will recollect that we have presented them with a few interesting articles from this work, which were politely furnished by the author previous to its publication.

The Illustrated Domestic Bible, No. 2. — We recently noticed this valuable work, by the Rev. J. Cobbin. Fetridge & Co., 20 State and 132 Washington Streets.

Acts and Resolves of Massachusetts, for 1850, with the Rolls and Messages. — This volume contains 584 pages, showing that the long session of the legislature must have been a laborious one.

Circular of the Central Committee of the United States on the Exhibition of all Nations, to be held in London, 1851. Washington: printed by Robert A. Waters. — This is a pamphlet containing rules and regulations in regard to the great industrial show, with arrangements for forwarding articles from this country, all of which must pass under the inspection of the Central Committee, or a sub-committee appointed in each state.

Letters on the Extension of Slavery. — We are indebted to Hon. Horace Mann for his Letters on the Extension of Slavery into California and New Mexico, and on the duty of Congress to provide the trial by jury for alleged fugitive slaves.

Farmer's Guide. — We have the fifth number of this able and instructive work, from Fetridge & Co.

List of Premiums, and Rules and Regulations for the third Cattle Show and Horticultural Exhibition of the Maryland State Agricultural Society, to be held in Baltimore, Oct. 23, 24, and 25.

ACKNOWLEDGMENTS.

Of Mr. George Hyde, (of the late firm of S. & G. Hyde,) nurseryman, Newton, a box of Hyde's Late Black Cherry. This fruit strongly resembles, in appearance, the Black Eagle, and, like this fine variety, it is of a very rich and excellent quality. The Late Black is about a week later than the Black Eagle, and is a very promising kind. It is hardy and vigorous.

Of Mr. John Washburn, Plymouth, Knevette's Giant Raspberry. This is a large red berry, resembling the Fastolff in its general appearance. It ripens between the Fastolff and Franconia, and is fully equal to either of them in quality, having more flavor than the former and less acidity than the latter. It ripens between these two, and the plants are said to be more hardy than either of them, so that they will endure our winters unprotected. It is new and promising. Also Ironmonger Gooseberries, remarkable for vigor and productiveness. The fruit is not large, but the quality is better than that of extremely large kinds; yet it has not that very fine pulp, delicate flavor, and smooth, thin skin of Houghton's Seedling.

OUR GRANITE HILLS.

"Thanks be to God for the mountains."

BY MRS. SARAH J. HALE.

What glorious thoughts, what glorious themes
To mountain tops belong!
The law from Sinai's summit came;
From Sion, sacred song; —
And Genius, on Parnassian heights,
His banner first unfurled;
And from the seven-hilled city waved
The sword that swayed the world!
Then let us raise the hymn of praise;
To us the hills were given;
And mountains' tops are altars set
To lift the soul to heaven.

Though Europe's plains are crushed with chains,
As every tyrant wills,
Yet Freedom's light is flashing bright
Along Helvetia's hills!
And should our Eagle stoop his wing
O'er prairie, plain, or sea,
Mount Washington an eyrie holds
Of deathless liberty!
Then let us raise the song of praise —
To us the heights were given;
Our Granite Hills are altars all,
To lift our hopes to heaven.

TERMS. — The New England Farmer is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be elegantly bound in muslin, embossed and gilt, at 25 cents a volume, if left at this office. As it is stereotyped, back numbers can be furnished to new subscribers.

☞ The Postage ☜

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STEREOTYPED AT THE
BOSTON STEREOTYPE FOUNDRY